Benefits of Operational Safety Information

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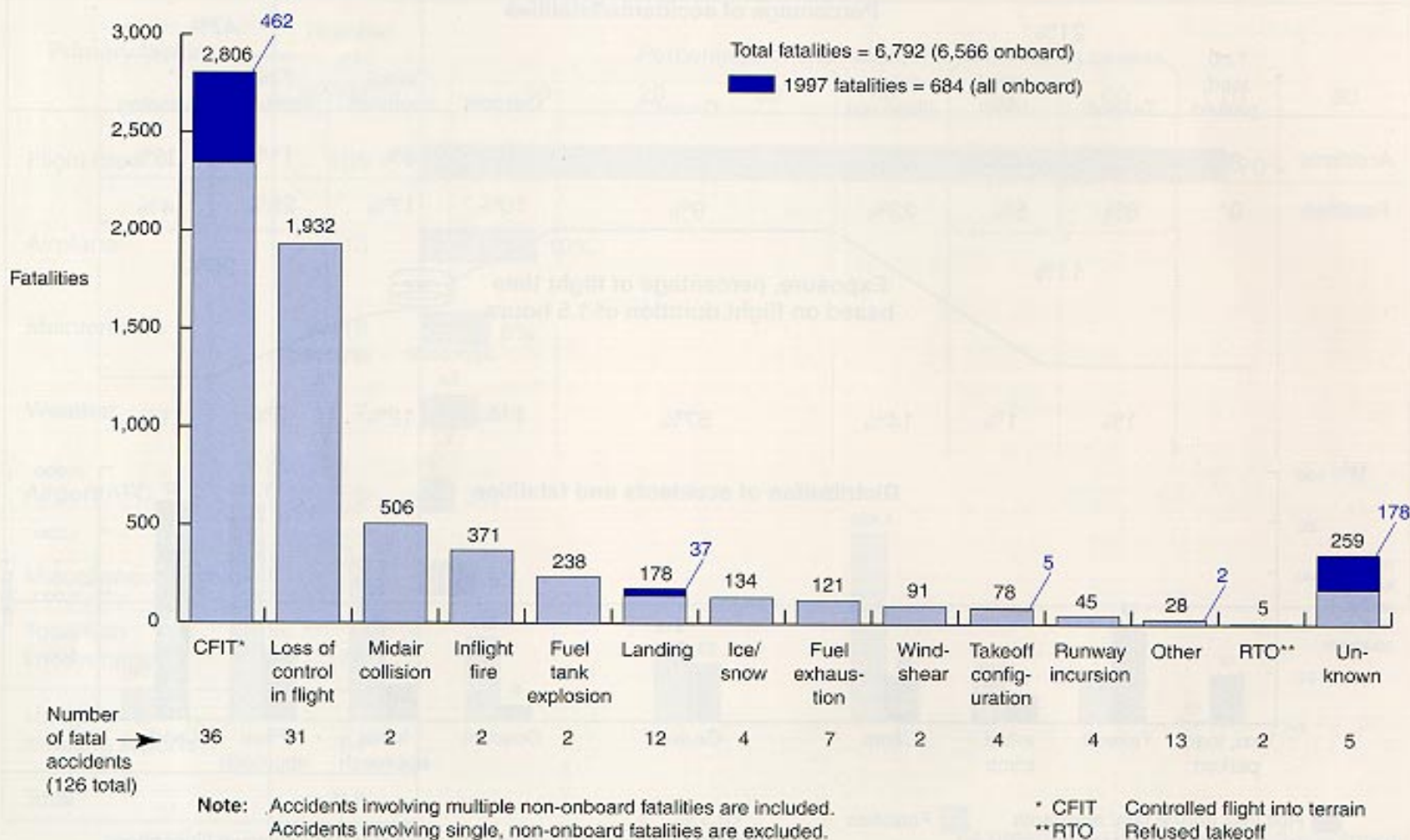
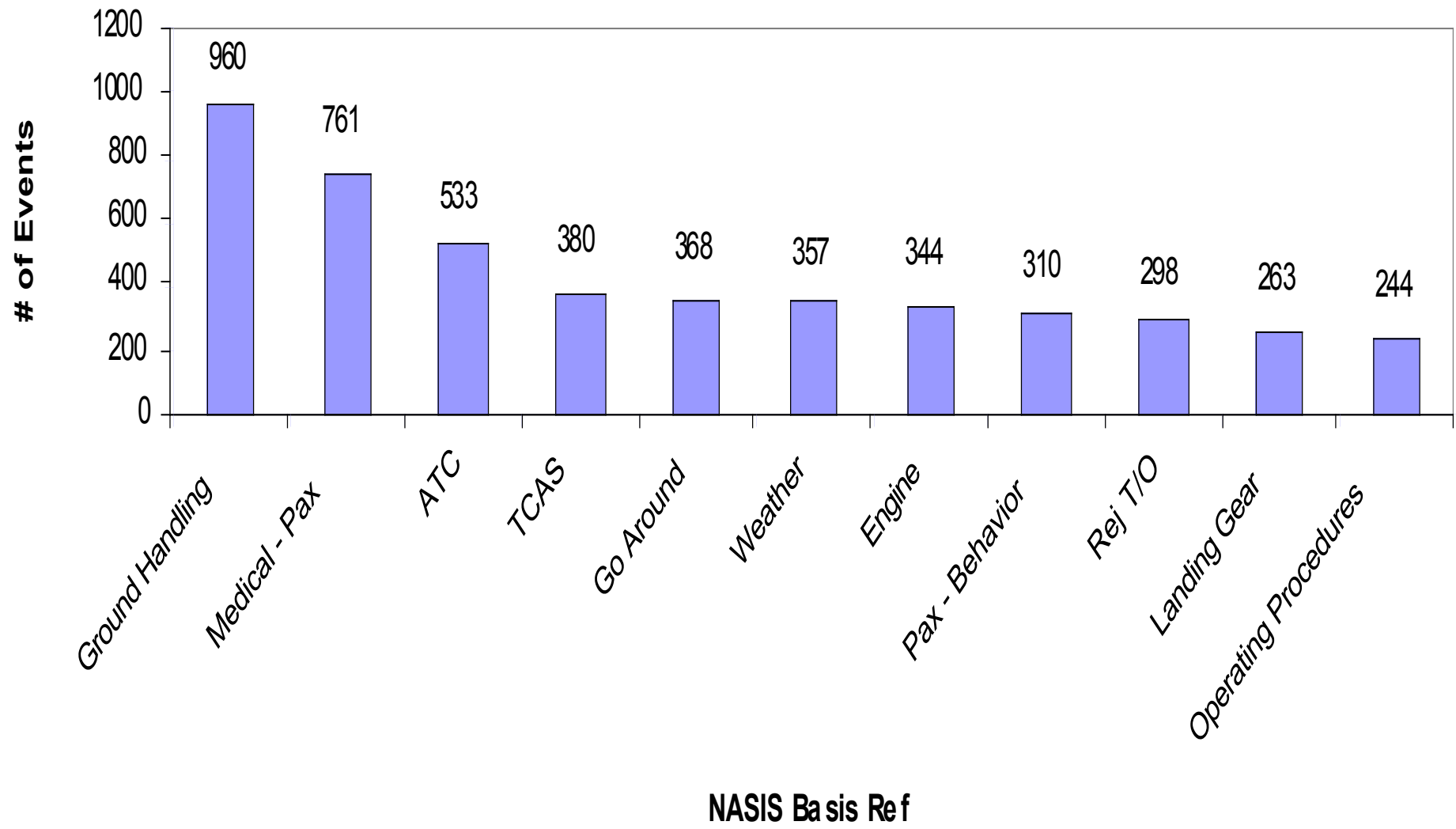# *Benefits of Operational Safety Information*

- Financial Justification
  - Direct IRR determination difficult if not impossible
- Reduction in Risk Justification
  - Emphasis on identifying high risk issues
  - Maximizing resources
  - Improvement in efficiency

Fatalities by Accident Categories

Fatal Accidents — Worldwide Commercial Jet Fleet — 1988 Through 1997

Total fatalities = 6,792 (6,566 onboard)
1997 fatalities = 684 (all onboard)

Category	Fatalities	Number of fatal accidents (126 total)
CFIT*	2,806 / 462	36
Loss of control in flight	1,932	31
Midair collision	506	2
Inflight fire	371	2
Fuel tank explosion	238	2
Landing	178 / 37	12
Ice/snow	134	4
Fuel exhaustion	121	7
Windshear	91	2
Takeoff configuration	78	4
Runway incursion	45 / 5	4
Other	28	13
RTO**	5 / 2	2
Unknown	259 / 178	5

Note: Accidents involving multiple non-onboard fatalities are included.
Accidents involving single, non-onboard fatalities are excluded.

* CFIT — Controlled flight into terrain
** RTO — Refused takeoff

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ASR NASIS Breakdown
January 1, 97 - December 31, 1997

# of Events

Category	Value
Ground Handling	960
Medical - Pax	761
ATC	533
TCAS	380
Go Around	368
Weather	357
Engine	344
Pax - Behavior	310
Rej T/O	298
Landing Gear	263
Operating Procedures	244

NASIS Basis Ref

Benefits of Operational Safety Information

- NWA Gains from Reporting Program
  - Weight and Balance Errors
  - DC9 Control Cable Icing
  - High Speed RTO's
  - Gate Evacuation Procedures
  - Unruly Passenger Program
  - False TCAS RA's
  - GPWS Alerts
  - Pilot/Flt Attendant Turbulence Procedures

Benefits of Operational Safety Information

- **Characteristics of Safety Information**
  - Source of the information
  - Safety database quality control and standardization
  - The environment
  - Data usage actual or potential
- **Preserving the Safety Information Tool**
- **The Direction of Safety Information**

Benefits of Operational Safety Information

- Characteristics of Safety Data
  - Source of the information
    - Data collected for different reasons/needs
      - Manufacturer's
      - Operators
      - Government
      - Employee unions/associations
    - Multiple formats
    - Different level of detail and emphasis

Benefits of Operational Safety Information

- Safety Database Quality Control and Standardization
  - Standardization of data entry
    - a/c types, locations, incident descriptions
  - Standardization of data classifications
    - Rejected takeoff, aborted takeoff, go around, missed approach
  - Quality Control
    - Classification of like events
    - Methodical process to ensure accuracy

Benefits of Operational Safety Information

- The Environment
  - Micro-environment
    - Corporate Culture
  - Macro-environment
    - Government/Industry Culture
  - Data usage <u>actual</u> or <u>perceived</u>
    - Penalty
    - Safety Purposes

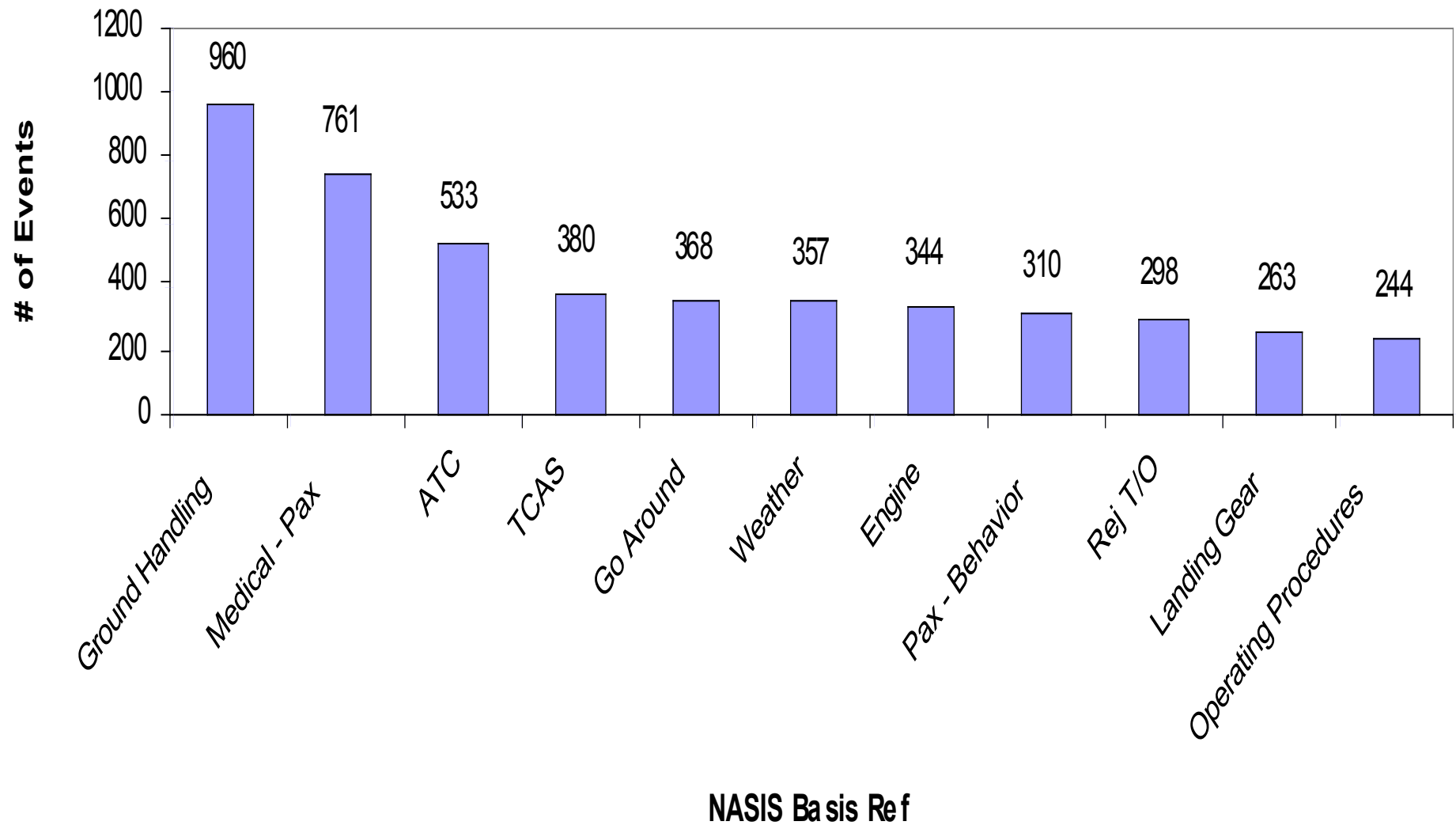# *Benefits of Operational Safety Information*

- Environment Will Dictate Info Detail and Accuracy
  - Extent of info provided
    - Describe Event: Go Around
    - Describe Issues: Go Around due unstable approach
  - More important is what's not provided!
    - "We don't have any of those reports!"
    - "We must be safe"

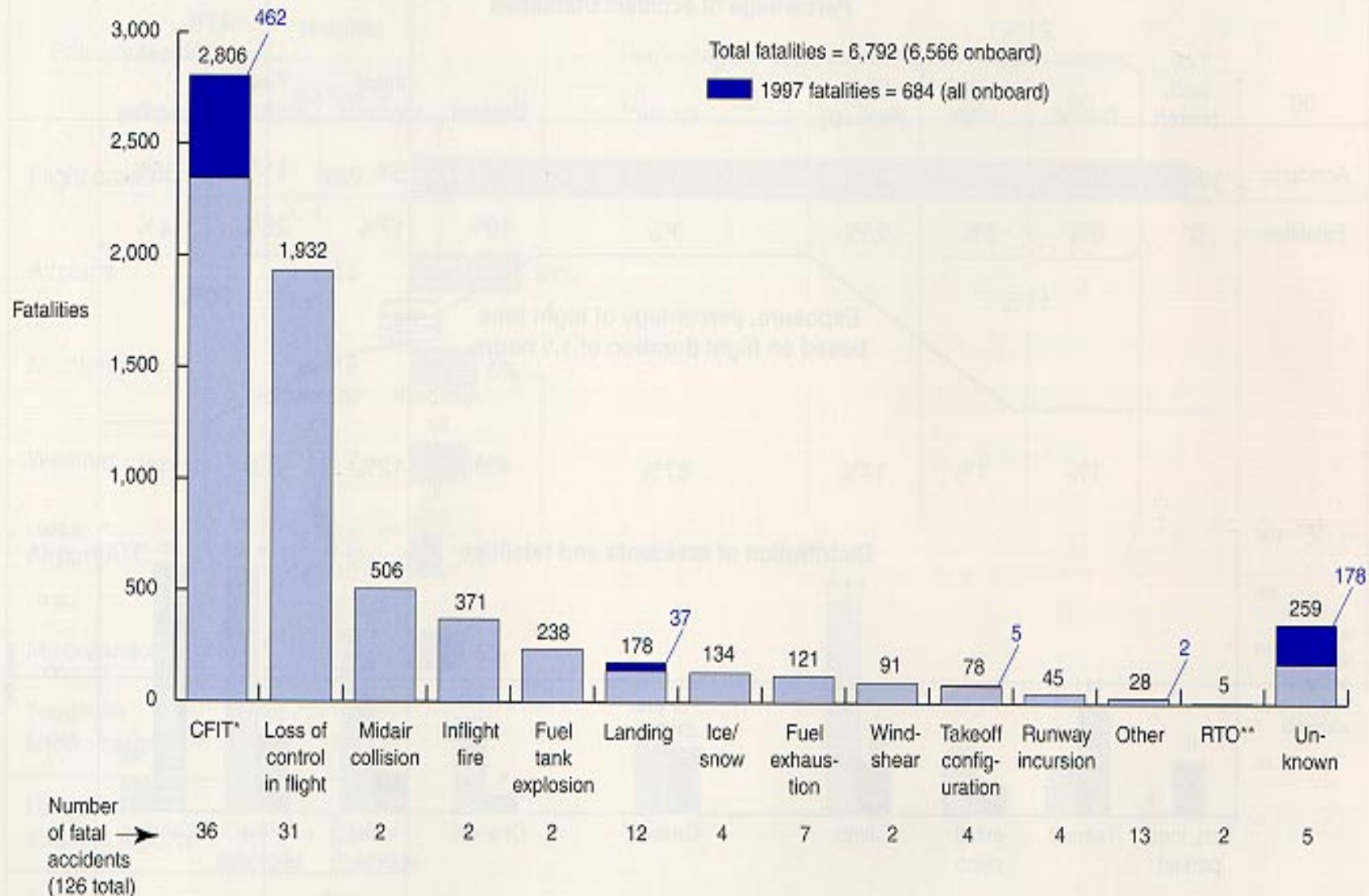# *Benefits of Operational Safety Information*

- Preserving the Safety Information Tool
  - CVR = Safety Information
    - Preserve Sources
    - Preserve Use
  - Not a "Get out of Jail Free Card"
    - Requires more responsibility and incurs increased liability
  - Self Critical Analysis Privilege

ASR NASIS Breakdown
January 1, 97 - December 31, 1997

Bar chart titled "ASR NASIS Breakdown, January 1, 97 - December 31, 1997". Y-axis: # of Events (0 to 1200). X-axis: NASIS Basis Ref.

NASIS Basis Ref	# of Events
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Fatalities axis: 0, 500, 1,000, 1,500, 2,000, 2,500, 3,000

Benefits of Reporting Programs

- **The Direction of Safety Information**
  - Large Multi-user Databases?
    - Least effective
    - Least detailed
  - Focused Databases?
    - Closer to operation
    - Better quality control
  - Environment Promoting Safety Information Sharing